

**Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382**

Final

**AIR QUALITY PERMIT
Issued under 401 KAR 52:030**

Permittee Name: Interplastic Manufacturing Company
Mailing Address: 3535 Latonia Ave.
Fort Wright, Kentucky 41015

Source Name: Same as above.
Mailing Address: Same as above.

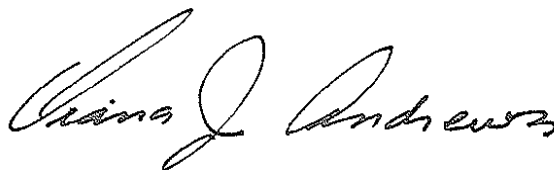
Source Location: 3535 Latonia Ave.
Fort Wright, Kentucky 41015

Permit ID: F-05-027 Revision 2
Agency Interest #: 2466
Activity ID: APE20080001
Review Type: Conditional Major, Construction/Operating
Source ID: 21-117-00086

Regional Office: Florence Regional Office
8020 Veterans Memorial Drive, Suite 110
Florence, KY 41042
(859) 525-4923

County: Kenton

Application
Complete Date: March 10, 2008
Issuance Date: December 15, 2006
Revision Date: May 20, 2008
Expiration Date: December 15, 2011



**John S. Lyons, Director
Division for Air Quality**

TABLE OF CONTENTS

SECTION	ISSUANCE	PAGE
A. PERMIT AUTHORIZATION	Initial	1
B. EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS	Revision 2	2
C. INSIGNIFICANT ACTIVITIES	Initial	29
D. SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS	Initial	32
E. SOURCE CONTROL EQUIPMENT REQUIREMENTS	Initial	34
F. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS	Initial	37
G. GENERAL PROVISIONS	Initial	40
H. ALTERNATE OPERATING SCENARIOS	N/A	46
I. COMPLIANCE SCHEDULE	N/A	46

	Permit type	Log or Activity#	Complete Date	Issuance Date	Summary of Action
F-05-027 Revision 1	Initial Issuance	APE20050001	10/21/05	12/15/06	Initial CM Construction/Operating Permit
F-05-027 Revision 2	Minor modification	APE20080001	3/10/08	5/20/08	Elimination of LDAR requirements

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:030, Federally-enforceable permits for non-major sources.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Process and Thinning Kettles

-- (SEU 57) Batch Polyester Polymerization Reaction and Thinning

Consisting of:

Equipment:	Process Kettle #1	Thinning Kettles #1 & #2	Weigh Tank #1
Capacity (gal.):	5200 (working volume: 3800)	8000 each (working volume: 5800)	Not listed
Constructed:	1973	1973	1982

-- (SEU 58) Batch Polyester Polymerization Reaction and Thinning

Consisting of:

Equipment:	Process Kettle #2	Thinning Kettles #3 & #4	Weigh Tank #1
Capacity (gal.):	5200 (working volume: 3800)	8000 each (working volume: 5800)	Not listed
Constructed:	1985	1985 / 1987	1982

-- (SEU 101) Batch Polyester Polymerization Reaction and Thinning

Consisting of:

Equipment:	Process Kettle #3	Thinning Kettles #5 & #6	Weigh Tank #2
Capacity (gal.):	8000 (working volume: 7500)	13000 each (working volume: 12000)	Not listed
Constructed:	1997	1997	1997

Primary Control:

-- (SEU 103) "New" Thermal Oxidizer

Manufacturer: John Zink

Model: SO# 901078

Description: Single chamber, 30 mmBtu/hr, incorporating waste heat boiler
(See SEU 102 in Insignificant Activities)

Fuel: Natural Gas – primary, Propane – auxiliary

Date constructed: 1996

Secondary Control:

-- (SEU 26) "Old" Thermal Oxidizer

Manufacturer: John Zink

Model: SO# X43231

Description: Single chamber, 2 mmBtu/hr

Fuel: Natural Gas – primary, Propane – auxiliary

Date constructed: 1980

APPLICABLE REGULATIONS:

401 KAR 50:012, *General application*, applies to the VOC emissions from SEU 57, 58, and 101. See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** and **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS** for source-wide requirements.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Process and Thinning Kettles (Continued)**

401 KAR 59:010, *New Process Operations*, applies to the PM emissions from SEU 58, and 101.

401 KAR 61:020, *Existing Process Operations*, applies to the PM emissions from SEU 57.

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to the emissions of all potentially hazardous or toxic substances from SEU 57, 58, and 101. See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements.

1. Operating Limitations:

- a. VOC and HAP emissions from SEU 57, 58, and 101 shall be captured and routed to either of the two Thermal Oxidizers listed above (SEU 103 or 26) at all times they are in operation or emitting VOC's and/or HAP's. [401 KAR 50:012, Section 1(1); and 401 KAR 52:030, Section 1]
- b. The permittee shall provide the utmost care and consideration, in the handling of hazardous matter or toxic substances, to the potentially harmful effects of the emissions resulting from such activities. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:

- a. See the **Testing, Monitoring, Recordkeeping, and Reporting Requirements**, below.
- b. See **Operating Limitation 1.a.**, above, and **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS**.

2. Emission Limitations:

- a. See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements.
- b. Emissions of particulate matter (PM) from the SEU 58 and 101 Process Kettles (PK #2 and #3) shall not exceed the Allowable Rate Limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$
Where E = rate of emissions in lb/hr, and
P = process weight in tons/hr (See "P_{ave}" under the **Compliance Demonstration Method** listed below).
- c. The opacity of visible emissions from the SEU 58 or 101 Process Kettles (PK #2 and #3) shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].
- d. Emissions of PM from the SEU 57 Process Kettle (PK #1) shall not exceed the Allowable Rate Limit as calculated by the following equation [401 KAR 61:020, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 4.10P^{0.67}$
Where E = rate of emissions in lb/hr, and
P = process weight in tons/hr (See "P_{ave}" under the **Compliance Demonstration Method** listed below).

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Process and Thinning Kettles (Continued)**

- e. The opacity of visible emissions from the SEU 57 Process Kettle (PK #1) shall not equal or exceed 40 percent [401 KAR 61:020, Section 3 (1)].

Compliance Demonstration Method:**a. Mass Emission Standard:**

- (1) For compliance with the PM mass emission standard, the allowable and actual emissions will be based on P_{ave} , where:

$$P_{ave} = (\text{total weight, in tons, of alkyd processed at each Process Kettle each month}) \div (\text{hours of alkyd processing at each Process Kettle each month})$$

- (2) Actual PM Emission Rate for SEU 57 or 58 = (2.350 lb/ton of alkyd produced) * (P_{ave}) * (1-0.90)

- (3) Actual PM Emission Rate for SEU 101 = (2.348 lb/ton of alkyd produced) * (P_{ave}) * (1-0.90)

b. Opacity Limits:

- (1) During periods of normal operation of the SEU 57, 58, and 101 Process Kettles (PK #1, #2, and #3) compliance is demonstrated through use of the Thermal Oxidizers (SEU 103 and 26).
- (2) If the SEU 57, 58, and 101 Process Kettles (PK #1, #2, and #3) are in operation during any period of malfunction of the Thermal Oxidizers (SEU 103 and 26), the permittee shall determine compliance with the opacity limits through maintenance of the records required by paragraph 5.c., below.

3. Testing Requirements:

- a. See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS** for control-device testing requirements.
- b. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements: The **Specific Recordkeeping Requirements, below, dictate the monitoring requirements.****5. Specific Recordkeeping Requirements:**

- a. The permittee shall record the occurrence, date, time, duration, cause, point of release, and any corrective action taken for each incident when any VOC and/or HAP emissions from any of the equipment listed above is not routed to either one of the Thermal Oxidizers (SEU 103 or 26).
- b. The permittee shall record the following parameters:
 - (1) Total weight of alkyd, in tons, produced at each Process Kettle each month;
 - (2) Total hours of alkyd processing at each Process Kettle during the month;
 - (3) Calculations of the Allowable Rate Limit and Actual PM Emission Rate for each Process Kettle for each month;

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Process and Thinning Kettles (Continued)

- (4) Total weight and type of thinning solvent, in tons, used in each Thinning Kettle each month.
 - c. During all periods of malfunction of the Thermal Oxidizers (SEU 103 or 26), if the SEU 57, 58, or 101 Process Kettles (PK #1, #2, and #3) are in operation, a daily (calendar day) log of the following information shall be kept:
 - (1) Whether any air emissions were visible from the applicable Thermal Oxidizer stack;
 - (2) Whether the visible emissions were normal for the applicable Thermal Oxidizer stack;
 - (3) The cause of any abnormal emissions and any corrective action taken.

If visible emissions are observed, the permittee shall perform a reference Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the applicable Thermal Oxidizer stack. The opacity observed shall be recorded. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.
6. **Specific Reporting Requirements:** See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS, Specific Recordkeeping Requirement 6.b.**
7. **Specific Control Equipment Operating Conditions:** See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS.**

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Resin Blending Tanks

-- (SEU 11) Resin Storage Tank (RST) #2

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1972

-- (SEU 12) Resin Storage Tank (RST) #1

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1972

-- (SEU 17) Resin Storage Tank (RST) #4

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1972

-- (SEU 18) Resin Storage Tank (RST) #3

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1972

-- (SEU 29) Resin Storage Tank (RST) #6

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1972

-- (SEU 30) Resin Storage Tank (RST) #5

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1972

-- (SEU 34) Resin Storage Tank (RST) #8

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1972

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Resin Blending Tanks (Continued)

-- (SEU 35) Resin Storage Tank (RST) #7

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1972

-- (SEU 37) Resin Storage Tank (RST) #11

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1984

-- (SEU 44) Drum Blend/Tote (DBT) Area

Description: Batch Resin Blending – Fugitive Emissions
Capacity: 55 to 250 gal.
Maximum Hourly Rate: 0.0123 tons resin blended
Construction Date: 1998

-- (SEU 48) Resin Storage Tank (RST) #10

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1984

-- (SEU 55) Resin Storage Tank (RST) #12

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1984

-- (SEU 104) Resin Storage Tank (RST) #13

Description: Batch Resin Blending
Capacity: 16,000 gal.
Maximum Hourly Rate: 0.4423 tons resin blended
Construction Date: 1997

-- (SEU 105) Resin Storage Tank (RST) #14

Description: Batch Resin Blending
Capacity: 16,000 gal.
Maximum Hourly Rate: 0.4423 tons resin blended
Construction Date: 1997

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Resin Blending Tanks (Continued)

-- (SEU 110) Resin Storage Tank (RST) #9

Description: Batch Resin Blending
Capacity: 12,000 gal.
Maximum Hourly Rate: 0.3317 tons resin blended
Construction Date: 1984

-- (SEU 111) High Shear #1, #2, and #3

Description: Batch Resin Blending
Capacity: 1200 gal. each
Maximum Hourly Rate: 0.0332 tons resin blended each
Construction Date: 1997

-- (SEU 112) Resin Blend Tank (RBT) #1

Description: Batch Resin Blending
Capacity: 6000 gal.
Maximum Hourly Rate: 0.1658 tons resin blended
Construction Date: 1997

-- (SEU 113) Resin Blend Tank (RBT) #1

Description: Batch Resin Blending
Capacity: 6000 gal.
Maximum Hourly Rate: 0.1658 tons resin blended
Construction Date: 1997

-- (SEU 115) P3 Resin Mix Tank

Description: Batch Resin Blending
Capacity: 1200 gal.
Maximum Hourly Rate: 0.0296 tons resin blended
Construction Date: 1990

-- (SEU 116) Small Batch Tank (SBT)

Description: Batch Resin Blending
Capacity: 600 gal.
Maximum Hourly Rate: 0.0148 tons resin blended
Construction Date: 1993

Primary Control: -- (SEU 103) "New" Thermal Oxidizer
Manufacturer: John Zink
Model: SO# 901078
Description: Single chamber, 30 mmBtu/hr, incorporating waste heat boiler
(See SEU 102 in Insignificant Activities)
Fuel: Natural Gas – primary, Propane – auxiliary
Date constructed: 1996

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Resin Blending Tanks (Continued)

Secondary Control: -- (SEU 26) "Old" Thermal Oxidizer
Manufacturer: John Zink
Model: SO# X43231
Description: Single chamber, 2 mmBtu/hr
Fuel: Natural Gas – primary, Propane – auxiliary
Date constructed: 1980

APPLICABLE REGULATIONS:

401 KAR 50:012, *General application*, applies to the VOC emissions from the Resin Blending Tanks. See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** and **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS** for source-wide requirements.

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to the emissions of all potentially hazardous or toxic substances from the Resin Blending Tanks. See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements.

1. Operating Limitations:

- a. VOC and HAP emissions from the Resin Blending Tanks, except SEU 44 (i.e.: the Drum Blend/Tote Area), shall be captured and routed to either of the two Thermal Oxidizers listed above (SEU 103 or 26) at all times they are in operation or emitting VOC's and/or HAP's. [401 KAR 50:012, Section 1(1); and 401 KAR 52:030, Section 1]
- b. The permittee shall provide the utmost care and consideration, in the handling of hazardous matter or toxic substances, to the potentially harmful effects of the emissions resulting from such activities. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:

- a. See the **Testing, Monitoring, Recordkeeping, and Reporting Requirements**, below.
- b. See **Operating Limitation 1.a.**, above, and **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS**.

2. Emission Limitations: See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements.

3. Testing Requirements:

- a. See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS** for control-device testing requirements.
- b. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Resin Blending Tanks (Continued)

4. **Specific Monitoring Requirements:** The **Specific Recordkeeping Requirements**, below, dictate the monitoring requirements.
5. **Specific Recordkeeping Requirements:**
 - a. The permittee shall record the occurrence, date, time, duration, cause, point of release, and any corrective action taken for each incident when any VOC and/or HAP emissions from any of the equipment listed above, except SEU 44 (i.e.: the Drum Blend/Tote Area), is not routed to either one of the Thermal Oxidizers (SEU 103 or 26).
 - b. The permittee shall record the amount, in tons, of resin blended in each Resin Blending Tank each month.
6. **Specific Reporting Requirements:** See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS**, **Specific Recordkeeping Requirement 6.b.**
7. **Specific Control Equipment Operating Conditions:** See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Packaging Processes

-- (SEU 39) Tank Truck Loading Area #1

Description: Top/splash loading – fugitive emissions
Maximum Hourly Rate: 0.5368 (1000 gal.)
Construction Date: 1998

-- (SEU 44) Drum Blend/Tote (DBT) Area

Description: Top/splash loading – fugitive emissions
Maximum Hourly Rate: 0.0027 (1000 gal.)
Construction Date: 1998

-- (SEU 115) P3 Resin Mix Tank

Description: Top/splash loading – fugitive emissions
Maximum Hourly Rate: 0.0064 (1000 gal.)
Construction Date: 1990

-- (SEU 116) Small Batch Tank (SBT)

Description: Top/splash loading – fugitive emissions
Maximum Hourly Rate: 0.0032 (1000 gal.)
Construction Date: 1993

-- (SEU 117) Automatic Drumming Station (ADS) #1

Description: Top/splash loading – fugitive emissions
Maximum Hourly Rate: 0.2644 (1000 gal.)
Construction Date: 1996

-- (SEU 118) Automatic Drumming Station (ADS) #2

Description: Top/splash loading – fugitive emissions
Maximum Hourly Rate: 0.5368 (1000 gal.)
Construction Date: 1996

-- (SEU 119) Tank Truck Loading Area #2

Description: Top/splash loading – fugitive emissions
Maximum Hourly Rate: 0.5368 (1000 gal.)
Construction Date: 1998

APPLICABLE REGULATIONS:

401 KAR 50:012, *General application*, applies to the VOC emissions from the Packaging Processes. See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Packaging Processes (Continued)

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to the emissions of all potentially hazardous or toxic substances from the Packaging Processes. See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements.

1. **Operating Limitations:** The permittee shall provide the utmost care and consideration, in the handling of hazardous matter or toxic substances, to the potentially harmful effects of the emissions resulting from such activities. [401 KAR 63:020, Section 3]

Compliance Demonstration Method: See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS**.

2. **Emission Limitations:** See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements.
3. **Testing Requirements:** Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.
4. **Specific Monitoring Requirements:** The **Specific Recordkeeping Requirements**, below, dictate the monitoring requirements.
5. **Specific Recordkeeping Requirements:** The permittee shall record the amount, in thousands of gallons (1000 gallons), of resin loaded at each packaging point each month.
6. **Specific Reporting Requirements:** See **SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Resin (Product) Storage Tanks

-- (SEU 4) Resin Storage Tank (RST) F2

Description: Vertical Fixed Roof Storage Tank
Capacity: 12,000 gal.
Maximum Annual Throughput: 1,439.8 (1000 gal.)
Construction Date: 1972

-- (SEU 5) Resin Storage Tank (RST) F1

Description: Vertical Fixed Roof Storage Tank
Capacity: 12,000 gal.
Maximum Annual Throughput: 1,439.8 (1000 gal.)
Construction Date: 1972

-- (SEU 19) Resin Storage Tank (RST) F4

Description: Vertical Fixed Roof Storage Tank
Capacity: 12,000 gal.
Maximum Annual Throughput: 1,439.8 (1000 gal.)
Construction Date: 1972

-- (SEU 45) Resin Storage Tank (RST) F3

Description: Vertical Fixed Roof Storage Tank
Capacity: 12,000 gal.
Maximum Annual Throughput: 1,439.8 (1000 gal.)
Construction Date: 1972

-- (SEU 106) Resin Storage Tank (RST) 17

Description: Vertical Fixed Roof Storage Tank
Capacity: 30,000 gal.
Maximum Annual Throughput: 1,799.7 (1000 gal.)
Construction Date: 1997

-- (SEU 107) Resin Storage Tank (RST) 18

Description: Vertical Fixed Roof Storage Tank
Capacity: 30,000 gal.
Maximum Annual Throughput: 1,799.7 (1000 gal.)
Construction Date: 1997

Primary Control: -- (SEU 103) “New” Thermal Oxidizer
Manufacturer: John Zink
Model: SO# 901078
Description: Single chamber, 30 mmBtu/hr, incorporating waste heat boiler
(See SEU 102 in Insignificant Activities)
Fuel: Natural Gas – primary, Propane – auxiliary
Date constructed: 1996

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Resin (Product) Storage Tanks (Continued)

Secondary Control: -- (SEU 26) "Old" Thermal Oxidizer
Manufacturer: John Zink
Model: SO# X43231
Description: Single chamber, 2 mmBtu/hr
Fuel: Natural Gas – primary, Propane – auxiliary
Date constructed: 1980

APPLICABLE REGULATIONS:

401 KAR 50:012, *General application*, applies to the VOC emissions from the Resin Storage Tanks. See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** and **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS** for source-wide requirements.

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to the emissions of all potentially hazardous or toxic substances from the Resin Storage Tanks. See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements.

1. Operating Limitations:

- a. VOC and HAP emissions from the Resin Storage Tanks shall be captured and routed to either of the two Thermal Oxidizers listed above (SEU 103 or 26) at all times they are in operation or emitting VOC's and/or HAP's. [401 KAR 50:012, Section 1(1); and 401 KAR 52:030, Section 1]
- b. The permittee shall provide the utmost care and consideration, in the handling of hazardous matter or toxic substances, to the potentially harmful effects of the emissions resulting from such activities. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:

- a. See the **Testing, Monitoring, Recordkeeping, and Reporting Requirements**, below.
- b. See **Operating Limitation 1.a.**, above, and **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS**.

2. Emission Limitations: See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements.

3. Testing Requirements:

- a. See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS** for control-device testing requirements.
- b. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Resin (Product) Storage Tanks (Continued)

4. **Specific Monitoring Requirements:** The **Specific Recordkeeping Requirements**, below, dictate the monitoring requirements.
5. **Specific Recordkeeping Requirements:**
 - a. The permittee shall record the occurrence, date, time, duration, cause, point of release, and any corrective action taken for each incident when any VOC and/or HAP emissions from any of the equipment listed above is not routed to either one of the Thermal Oxidizers (SEU 103 or 26).
 - b. The permittee shall record the throughput, in thousands of gallons (1000 gallons), of resin for each Resin Storage Tank each month.
6. **Specific Reporting Requirements:** See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS**, **Specific Recordkeeping Requirement 6.b.**
7. **Specific Control Equipment Operating Conditions:** See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS.**

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Hot Boxes

-- (SEU 120) **Hot Box #1**

Description: 4 Drum Capacity
Maximum Annual Throughput: 208,000 lbs/yr
Construction Date: 1988

-- (SEU 121) **Hot Box #2**

Description: 4 Drum Capacity
Maximum Annual Throughput: 208,000 lbs/yr
Construction Date: 1993

-- (SEU 134) **Hot Box #3**

Description: 4 Drum Capacity
Maximum Annual Throughput: 208,000 lbs/yr
Construction Date: 2006 (Anticipated Installation Date)

Primary Control: -- (SEU 103) "New" Thermal Oxidizer
Manufacturer: John Zink
Model: SO# 901078
Description: Single chamber, 30 mmBtu/hr, incorporating waste heat boiler
(See SEU 102 in Insignificant Activities)
Fuel: Natural Gas – primary, Propane – auxiliary
Date constructed: 1996

Secondary Control: -- (SEU 26) "Old" Thermal Oxidizer
Manufacturer: John Zink
Model: SO# X43231
Description: Single chamber, 2 mmBtu/hr
Fuel: Natural Gas – primary, Propane – auxiliary
Date constructed: 1980

APPLICABLE REGULATIONS:

401 KAR 50:012, *General application*, applies to the VOC emissions from the Hot Boxes. See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** and **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS** for source-wide requirements.

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to the emissions of all potentially hazardous or toxic substances from the Hot Boxes. See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements.

1. Operating Limitations:

- a. VOC and HAP emissions from the Hot Boxes shall be captured and routed to either of the two Thermal Oxidizers listed above (SEU 103 or 26) at all times they are in

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Hot Boxes

operation or emitting VOC's and/or HAP's. [401 KAR 50:012, Section 1(1); and 401 KAR 52:030, Section 1]

- b. The permittee shall provide the utmost care and consideration, in the handling of hazardous matter or toxic substances, to the potentially harmful effects of the emissions resulting from such activities. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:

- a. See the **Testing, Monitoring, Recordkeeping, and Reporting Requirements**, below.
- b. See **Operating Limitation 1.a.**, above, and **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS**.

2. **Emission Limitations:** See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements.

3. **Testing Requirements:**

- a. See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS** for control-device testing requirements.
- b. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. **Specific Monitoring Requirements:** The **Specific Recordkeeping Requirements**, below, dictate the monitoring requirements.

5. **Specific Recordkeeping Requirements:**

- a. The permittee shall record the occurrence, date, time, duration, cause, point of release, and any corrective action taken for each incident when any VOC and/or HAP emissions from any of the equipment listed above is not routed to either one of the Thermal Oxidizers (SEU 103 or 26).
- b. The permittee shall record the throughput, in tons, of resin processed in each Hot Box each month.

6. **Specific Reporting Requirements:** See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS**, **Specific Recordkeeping Requirement 6.b.**

7. **Specific Control Equipment Operating Conditions:** See **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS**.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Bulk Powder Handling System

-- (SEU 132) Isophthalic Acid (IPA) Bulk Powder Handling System

Description: Storage silo, 2 x blowers, 4 x cyclones, pneumatic lines
Throughput: 0.428 tons IPA/hour (back-calculated from annual usage)
Construction Date: 2005

Control: -- (132) 111A Baghouse
Manufacturer: Chicago Conveyor Corp.
Model: 440R-28-45
Description: Bin vent baghouse w/ rev. nitrogen pulse-jet
Destruction Efficiency: 95% (Assumed)
Date constructed: 2005

-- (SEU 133) Bagged Powder Handling System

Description: Supersack charging station, 2 x blowers, 3 x cyclones, pneumatic lines
Throughput: 0.149 tons/hour (back-calculated from annual usage of Adipic Acid, Fumaric Acid, Terephthalic Acid, and Tetrahydrophthalic Anhydride)
Construction Date: 2005

Control: -- (133) 211C Cartridge Filter
Manufacturer: Chicago Conveyor Corp.
Model: 440-36-50
Description: Cartridge housing w/ rev. nitrogen pulse-jet
Destruction Efficiency: 95% (Assumed)
Date constructed: 2005

APPLICABLE REGULATIONS:

401 KAR 50:055, *General compliance requirements*, applies to SEU 132 and 133 with regard to the use of the 111A Baghouse and 211C Cartridge Filter, respectively.

401 KAR 59:010, *New Process Operations*, applies to the PM emissions from SEU 132, and 133.

1. Operating Limitations:

- a. As indicated in the application, and in order to achieve compliance with the process weight rate emission limitations, PM emissions from SEU 132 and 133 shall vent to the 111A Baghouse and 211C Cartridge Filter, respectively. [401 KAR 52:055, Section 2(5)]
- b. In order to achieve compliance with the process weight rate emission limitations, the 111A Baghouse and 211C Cartridge Filter shall be operating at all times that PM emissions are routed to them. [401 KAR 52:055, Section 2(5)]

Compliance Demonstration Method: See the **Testing, Monitoring, Recordkeeping, and Reporting Requirements**, below.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Bulk Powder Handling System (continued)****2. Emission Limitations:**

- a. Emissions of particulate matter (PM) from SEU 132 and 133 (calculated separately) shall not exceed the Allowable Rate Limit as calculated by the following equation [401 KAR 59:010, Section 3 (2)]:
For process rates up to 60,000 lb/hr: $E = 3.59P^{0.62}$
Where E = rate of emissions in lb/hr, and
P = process weight in tons/hr (See “P_{ave}” under the **Compliance Demonstration Method** listed below).
- b. The opacity of visible emissions from SEU 132 or 133 shall not equal or exceed 20 percent [401 KAR 59:010, Section 3 (1)].

Compliance Demonstration Method:**a. Mass Emission Standard:**

- (1) For compliance with the PM mass emission standard, the allowable and actual emissions will be based on P_{ave}, where:

$P_{ave} = (\text{total weight, in tons, of powdered material throughput at each unit (i.e.: SEU 132 and 133) each month}) \div (\text{hours of powder transfer at each unit (i.e.: SEU 132 and 133) each month})$

- (2) Actual PM Emission Rate for SEU 132 or 133 = (20 lb/ton of powder transferred) * (P_{ave}) * (1-0.95)

b. Opacity Limits:

- (1) During periods of normal operation of SEU 132 and 133 compliance is demonstrated through use of the 111A Baghouse and 211C Cartridge Filter, respectively.
- (2) If SEU 132 and 133 are in operation during any period of malfunction of the 111A Baghouse and 211C Cartridge Filter, respectively, the permittee shall determine compliance with the opacity limits through maintenance of the records required by paragraph 5.c., below.

3. Testing Requirements: Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.**4. Specific Monitoring Requirements:** The **Specific Recordkeeping Requirements**, below, dictate the monitoring requirements.**5. Specific Recordkeeping Requirements:**

- a. The permittee shall record the occurrence, date, time, duration, cause, point of release, and any corrective action taken for each incident when PM emissions from SEU 132 or 133 are not routed to the 111A Baghouse and 211C Cartridge Filter, respectively.
- b. The permittee shall record the following parameters:
 - (1) Total weight of powdered material throughput, in tons, from each unit (i.e.: SEU 132 and 133) each month;
 - (2) Total hours of powder transfer at each unit (i.e.: SEU 132 and 133) during the month;

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Bulk Powder Handling System (continued)

- (3) Calculations of the Allowable Rate Limit and Actual PM Emission Rate for both SEU 132 and 133 for each month;
 - c. During all periods of malfunction of the 111A Baghouse or 211C Cartridge Filter, if SEU 132 or 133 is in operation, respectively, a daily (calendar day) log of the following information shall be kept:
 - (1) Whether any air emissions were visible from the 111A Baghouse or 211C Cartridge Filter, as applicable;
 - (2) Whether the visible emissions were normal for the applicable filter;
 - (3) The cause of any abnormal emissions and any corrective action taken.If visible emissions are observed, the permittee shall perform a reference Method 9 reading as outlined in Appendix M to 40 CFR Part 51 for the applicable filter. The opacity observed shall be recorded. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.
- 6. **Specific Reporting Requirements:** Each incident when PM emissions from SEU 132 or 133 are not routed to the 111A Baghouse or 211C Cartridge Filter, respectively, shall be reported to the Division for Air Quality's Florence office in accordance with **Section F.7.** of this permit.
- 7. **Specific Control Equipment Operating Conditions:**
 - a. Operate the 111A Baghouse and 211C Cartridge Filter in accordance with the manufacturer's instructions.
 - b. Maintain a copy of the manufacturer's instructions for each filter on site at all times.
- 8. **Alternate Operating Scenarios:**
 - a. During periods of scheduled or unscheduled maintenance of SEU 132 and/or SEU 133, the permittee may still charge powdered raw materials to the PK's using the same operating conditions that existed prior to construction of SEU 132 and 133. Specifically, Isophthalic Acid and Adipic Acid shall still be charged through a closed vent system, but other powdered raw materials may be charged through the PK manholes. [State only requirement, F-05-027 Revision 1]
 - b. The permittee shall record the occurrence, date, time, duration, cause, and corrective action taken for each period of scheduled and unscheduled maintenance of SEU 132 and 133, and the amount and method of material charged to each PK while operating under this Alternate Operating Scenario. [401 KAR 53:030, Section 10]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Pipeline Fugitives****-- (--) Pipeline Fugitive Emissions**

Description: Numerous connectors, valves, and pumps
Total Equipment Count: 11,681

APPLICABLE REGULATIONS:

401 KAR 50:012, *General application*, applies to the VOC emissions from Pipeline Fugitives.

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to the emissions of all potentially hazardous or toxic substances from Pipeline Fugitives.

1. **Operating Limitations:** The permittee shall provide the utmost care and consideration, in the handling of hazardous matter or toxic substances, to the potentially harmful effects of the emissions resulting from such activities. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:

- a. Compliance with 401 KAR 50:012 and 63:020 will be demonstrated as follows in **Compliance Demonstration Method 1.b. through 1.s.**, by the **Testing, Monitoring, Recordkeeping, and Reporting Requirements** that follow, and **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS**.

Pumps – Light Liquid Service

(Excluding the 32 Resin Pumps. See **Compliance Demonstration Method 1.t. – 1.u.** of this section for special Resin Pump requirements)

- b. Each pump in light liquid service shall be checked by visual inspection each calendar month for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected.
- c. (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in **Compliance Demonstration Method 1.p. – 1.s.** of this section.
(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

Open-ended Valves or Lines

- d. (1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve.
(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.
- e. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
- f. When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with **Compliance Demonstration Method 1.d.** of this section at all other times.
- g. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of **Compliance Demonstration Method 1.d., 1.e., and 1.f.** of this section.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Pipeline Fugitives (Continued)**

- h. Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in **Compliance Demonstration Method 1.d., 1.e., and 1.f.** of this section are exempt from the requirements of those paragraphs.

Valves – Light Liquid Service

- i. Each valve shall be checked by visual, audible, and olfactory inspection once each calendar quarter for indications of leaks from the valve. A leak is detected if there are indications of leaking from the valve.
- j. (1) Any valve for which a leak is not detected for 2 successive quarters may be monitored the first quarter of every year, beginning with the next year, until a leak is detected.
(2) If a leak is detected, the valve shall be monitored quarterly until a leak is not detected for 2 successive quarters.
- k. (1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in **Compliance Demonstration Method 1.p. – 1.s.** of this section.
(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
- l. First attempts at repair include, but are not limited to, the following best practices where practicable:
 - (1) Tightening of bonnet bolts;
 - (2) Replacement of bonnet bolts;
 - (3) Tightening of packing gland nuts;
 - (4) Injection of lubricant into lubricated packing.

Pumps & Valves – Heavy Liquid Service, and Connectors

- m. Each pump, valve, and connector shall be checked by visual, audible, and olfactory inspection once each calendar quarter for indications of leaks. If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak.
- n. (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in **Compliance Demonstration Method 1.p. – 1.s.** of this section.
(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
- o. First attempts at repair include, but are not limited to, the best practices described under **Compliance Demonstration Method 1.l.** of this section.

Delay of Repair

- p. Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Pipeline Fugitives (Continued)**

- q. Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.
- r. Delay of repair for valves will be allowed if:
 - (1) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and
 - (2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with **Section D**.
- s. Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

Resin Pumps

- t. Each Resin Pump shall be checked by visual inspection each calendar month for indications of abnormal leaks.
- u. (1) When an abnormal leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in **Compliance Demonstration Method 1.p. – 1.s.** of this section, above.
 - (2) A first attempt at repair shall be made no later than 5 calendar days after each abnormal leak is detected.

- 2. **Emission Limitations:** See **SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS** for source-wide requirements, and the **Compliance Demonstration Method** requirements, above.

3. Testing Requirements:

- a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.
- b. The owner or operator shall inspect each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:
 - (1) Procedures that conform to the general methods in ASTM E260–73, 91, or 96, E168–67, 77, or 92, E169–63, 77, or 93 shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.
 - (2) Organic compounds that are considered by the Division to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Pipeline Fugitives (Continued)**

- (3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Division disagrees with the judgment, paragraphs **3.b.(1)** and **(2)** of this section shall be used to resolve the disagreement.
 - c. The owner or operator shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply:
 - (1) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °C (1.2 in. H₂O at 68 °F). Standard reference texts or ASTM D2879–83, 96, or 97 shall be used to determine the vapor pressures.
 - (2) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H₂O at 68 °F) is equal to or greater than 20 percent by weight.
 - (3) The fluid is a liquid at operating conditions.
 - d. Samples used in conjunction with paragraphs **3.b.** and **3.c.** of this section shall be representative of the process fluid that is contained in or contacts the equipment.
- 4. Specific Monitoring Requirements:** The **Specific Monitoring Requirements** are included above in the **Compliance Demonstration Method**.
- 5. Specific Recordkeeping Requirements:**
- a. When each leak is detected as specified in the **Compliance Demonstration Method**, above, the following requirements apply:
 - (1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
 - (2) The identification on a valve may be removed after it has been monitored for 2 successive quarters as specified **Compliance Demonstration Method 1.j.**, above, and no leak has been detected during those 2 quarters.
 - (3) The identification on equipment except on a valve, may be removed after it has been repaired.
 - b. When each leak is detected as specified in the **Compliance Demonstration Method**, above, the following information shall be recorded in a log:
 - (1) The instrument and operator identification numbers and the equipment identification number.
 - (2) The date the leak was detected and the dates of each attempt to repair the leak.
 - (3) Repair methods applied in each attempt to repair the leak.
 - (4) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
 - (5) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
 - (6) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
 - (7) Dates of process unit shutdowns that occur while the equipment is unrepaired.
 - (8) The date of successful repair of the leak.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Pipeline Fugitives (Continued)

- c. The following information pertaining to all equipment subject to the requirements in the **Compliance Demonstration Method**, above, shall be recorded in a log that is kept in a readily accessible location:
 - (1) A list of identification numbers for the equipment.
 - (2) A list of identification numbers for equipment in vacuum service.
 - (3) A list of identification numbers for the 32 resin pumps that are “designed to leak.”
- d. Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

6. Specific Reporting Requirements:

- a. All semiannual reports (See **Section F.5.** and **F.6.** of this permit) to the Division shall include the following information, summarized from the information in the **Specific Recordkeeping Requirements:** [40 CFR 60.487(c)(1) – (4)]
 - (1) Process unit identification.
 - (2) For each quarter during the semiannual reporting period,
 - i. Number of valves for which leaks were detected as described in **Compliance Demonstration Method 1.i.**,
 - ii. Number of valves for which leaks were not repaired as required in **Compliance Demonstration Method 1.k.(1)**,
 - iii. Number of pumps for which leaks were detected as described in **Compliance Demonstration Method 1.b.**,
 - iv. Number of pumps for which leaks were not repaired as required in **Compliance Demonstration Method 1.c.(1)**, and
 - v. The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.
 - (3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Heat Exchangers

-- (SEU 9) **Cleaver-Brooks Fire-Tube Boiler**

Description: Rating: 20.92 mmBtu/hr
Fuel: Natural Gas – primary, Propane – auxiliary
Constructed: 1972

-- (SEU 10) **Eclipse Hot Oil Heater #1**

Description: Rating: 5.0 mmBtu/hr
Fuel: Natural Gas – primary, Propane – auxiliary
Constructed: 1973

-- (SEU 33) **Dixon Hot Oil Heater #2**

Description: Rating: 5.0 mmBtu/hr
Fuel: Natural Gas – primary, Propane – auxiliary
Constructed: 1985

-- (SEU 103) **“New” John Zink Thermal Oxidizer**

Description: Equipped with waste-heat boiler (See SEU 102 in Insignificant Activities)
Rating: 30.0 mmBtu/hr
Fuel: Natural Gas – primary, Propane – auxiliary
Constructed: 1997

-- (SEU 109) **Gas Atmospheres Inert Gas Generator**

Description: Rating: 2.4 mmBtu/hr
Fuel: Natural Gas – primary, Propane – auxiliary
Constructed: 1996

APPLICABLE REGULATIONS:

401 KAR 59:015, *New indirect heat exchangers*, applies to the heat exchangers identified above.

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, applies to the “New” John Zink Thermal Oxidizer (SEU 103).

1. **Operating Limitations:** None.

2. **Emission Limitations:**

- a. Particulate matter emissions shall not exceed the limits specified below for each boiler. [401 KAR 59:015, Section 4 (1)(c); O-83-50A; and C-85-89]

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Heat Exchangers (Continued)

Heat Exchanger	Emission Limit (lb/mmBtu)
Cleaver-Brooks Boiler (SEU 9) and Eclipse Hot Oil Heater #1 (SEU 10)	0.438
Dixon Hot Oil Heater #2 (SEU 33)	0.422
“New” J.Z. Thermal Oxidizer (SEU 103) and Gas Atmospheres Inert Gas Generator (SEU 109)	0.359

- b. Sulfur dioxide emissions shall not exceed the limits specified below for each boiler. [401 KAR 59:015, Section 5 (1)(c)]

Boiler	Emission Limit (lb/mmBtu)
Cleaver-Brooks Boiler (SEU 9) and Eclipse Hot Oil Heater #1 (SEU 10)	1.96
Dixon Hot Oil Heater #2 (SEU 33)	1.83
“New” J.Z. Thermal Oxidizer (SEU 103) and Gas Atmospheres Inert Gas Generator (SEU 109)	1.39

- c. The opacity of visible emissions shall not exceed 20 percent [401 KAR 59:015, Section 4 (2)] except as provided below:
- (1) Pursuant to 401 KAR 59:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.
 - (2) Pursuant to 401 KAR 59:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer’s recommendations.
 - (3) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method:

Mass Emission Limits:

The heat exchanges listed above shall be deemed in compliance with the applicable mass emission standards (lb/mmBtu) for particulate matter and sulfur dioxide while natural gas or LPG is the only fuel used.

Opacity Limit:

The heat exchanges listed above shall be deemed in compliance with the applicable visible emission standard while natural gas or LPG is the only fuel used.

3. **Testing Requirements:** Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Heat Exchangers (Continued)

- 4. Specific Monitoring Requirements:** The permittee shall monitor the amount and type of fuel burned on a daily basis at each boiler. [40 CFR 60.48c(g), and 401 KAR 52:030, Section 10] The daily usage shall be determined by the following apportionment method: The permittee shall obtain monthly readings from the main natural gas meter and each individual burner natural gas meter. The permittee shall divide each individual burner natural gas meter reading by the sum of the individual burner natural gas meter readings to obtain a percentage of use factor for each burner. The permittee shall multiply the percentage of use factor for each burner by the main natural gas meter reading to estimate the actual gas usage for each burner for the month. The permittee shall divide the monthly usage estimate from each burner by the number of days each burner was in operation for that month to obtain a daily record.
- 5. Specific Recordkeeping Requirements:** The permittee shall keep records of the items listed in **4. Specific Monitoring Requirements**, above, and make them available to Division personnel upon request.
- 6. Specific Reporting Requirements:** See **SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS.**

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:030, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

<u>Description</u>	<u>Generally Applicable Regulation</u>
Raw Material Storage Tanks	
-- (SEU 3) Diallyl Phthalate (DAP) UST 5,000 gal., Constructed 1972, Underground (On site, but out of service)	401 KAR 50:012
-- (SEU 7) Fuel Oil UST 20,000 gal., Constructed 1972, Underground (On site, but out of service)	401 KAR 50:012
-- (SEU 8) Styrene UST 30,000 gal., Constructed 1998, Underground	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 14) Maleic Anhydride AST 15,000 gal., Constructed 1972, Vert. Fixed Roof	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 15) 2-MP-Diol AST 13,000 gal., Constructed 1972, Vert. Fixed Roof	401 KAR 50:012
-- (SEU 16) 2-Ethyl Hexanol AST 13,000 gal., Constructed 1972, Vert. Fixed Roof	401 KAR 50:012
-- (SEU 20) Propylene Glycol UST 23,000 gal., Constructed 1976, Underground	401 KAR 50:012
-- (SEU 21) Propylene Glycol UST 12,000 gal., Constructed 1976, Underground	401 KAR 50:012
-- (SEU 22) Acetone UST 10,000 gal., Constructed 1998, Underground	None.
-- (SEU 23) n-Butyl Acrylate UST 10,000 gal., Constructed 1998, Underground	401 KAR 50:012
-- (SEU 24) Dipropylene Glycol AST 13,000 gal., Constructed 1990, Vert. Fixed Roof	401 KAR 50:012
-- (SEU 27) Phthalic Anhydride AST 15,000 gal., Constructed 1984, Vert. Fixed Roof	401 KAR 50:012 & 401 KAR 63:020

SECTION C - INSIGNIFICANT ACTIVITIES (Continued)

<u>Description</u>	<u>Generally Applicable Regulation</u>
Raw Material Storage Tanks (Continued)	
-- (SEU 28) Ethylene Glycol AST 13,000 gal., Constructed 1979, Vert. Fixed Roof	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 36) Neopentyl Glycol AST 13,000 gal., Constructed 1985, Vert. Fixed Roof	401 KAR 50:012
-- (SEU 40) Methyl Methacrylate UST 10,000 gal., Constructed 1998, Underground	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 41) Styrene UST 30,000 gal., Constructed 1998, Underground	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 43) Diethylene Glycol AST 13,000 gal., Constructed 1988, Vert. Fixed Roof	401 KAR 50:012
-- (SEU 108) Dicyclopentadiene AST 30,000 gal., Constructed 1997, Vert. Fixed Roof (On site, but out of service)	401 KAR 50:012
-- (SEU 114) Dicyclopentadiene AST 30,000 gal., Constructed 1997, Vert. Fixed Roof (On site, but out of service)	401 KAR 50:012
-- (SEU 130) Liquid Nitrogen AST 11,300 gal., Constructed 2000, Vert. Fixed Roof (ASME Pressure tank – no emissions)	None.
-- (SEU 131) Liquid Propane AST 30,000 gal., Constructed 1996, Horz. Fixed Roof (ASME Pressure tank – no emissions)	None.
Miscellaneous Units	
-- (SEU 25) Caustic Tank	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 42) QC/Production Lab Hood	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 46) Production Bldg. #1 Roof Exhaust	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 47) Production Bldg. #2 Roof Exhaust	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 54) Maintenance Bldg. Exhaust Fan	None.

SECTION C - INSIGNIFICANT ACTIVITIES (Continued)

<u>Description</u>	<u>Generally Applicable Regulation</u>
Miscellaneous Units (Continued)	
-- (SEU 56) ADS/Wharehouse Bldg. Exhaust	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 102) Hot Oil Heater	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 123) R & D Lab Hood #1	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 124) Cooling Tower	None.
-- (SEU 125) Hazardous Material Storage Area	401 KAR 50:012 & 401 KAR 63:020
-- (SEU 126) Storm Water Pit	None.
-- (SEU 127) R & D Sink Fabrication Area	401 KAR 59:010
-- (SEU 128) R & D Pilot Lab Area	401 KAR 59:010
-- (SEU 129) R & D Lab Hood #2	401 KAR 50:012 & 401 KAR 63:020

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26, compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
2. Volatile Organic Compound (VOC), and Hazardous Air Pollutant (HAP) emissions, as measured by methods referenced in 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein.
3. **Source Emission Limitations:**
 - a. Source-wide emissions of VOC shall be reduced so that controlled and uncontrolled emissions (combined) are no more than 10% of pre-control source-wide VOC emissions. [401 KAR 50:012, Section 1(1)(a)2.]
 - b. The total annual source-wide emissions shall not exceed the following limitations on a twelve month (12) rolling total: [401 KAR 52:030, Section 1]
 - (1) Volatile Organic Compound (VOC) emissions shall not exceed 90 tons per year.
 - (2) Emissions of any single Hazardous Air Pollutant (HAP) shall not exceed 9.0 tons per year.
 - (3) Emissions of combined Hazardous Air Pollutants (HAP's) shall not exceed 22.5 tons per year.
 - c. Pursuant to 401 KAR 63:020, no owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants.

Compliance Demonstration Method:

- a. Calculate annual source-wide emissions for each month of the previous 12-month period (i.e.: for the month of January, the compliance demonstration shall be completed in February and shall include all data from February of the previous year to the last day of January). The monthly compliance demonstration shall include a comparison of pre-control and combined controlled and uncontrolled VOC emissions, and the monthly and 12-month rolling VOC, individual HAP, and combined HAP emissions from the following operations:
 - (1) All Process and Thinning Kettle operations.
 - (2) All Resin Blending Tank operations.
 - (3) All Packaging Process operations.
 - (4) All Resin (Product) Storage Tank operations.
 - (5) All Hot Boxes.
 - (6) All Pipeline Fugitives.
 - (7) All Heat Exchangers.
 - (8) All Insignificant Activities.Base all emission calculations on standard U.S. EPA methodology* and test results (i.e.: Process Kettles = EPA 450/4-90-003, March 1990, and AP-42, Chapter 6.4.
Thinning Kettles = EPA 450/4-90-003, March 1990.
Resin Blending = EPA 450/R-94-020, February 1994.
Packaging = AP-42, Chapter 5.2.
Storage Tanks = Tanks 4.0.

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (Continued)

Pipeline Fugitive = EPA 453/R-93-026, June 1993.

Combustion Equipment = AP-42, Chapter 1.4 and 1.5.)

*General U.S. EPA methodology is expressed through the general equation for emissions estimation found on the “Emissions Factors & AP 42” website:

$$E = A \times EF \times (1 - ER/100)$$

where:

E = emissions;

A = activity rate;

EF = emission factor, and

ER = overall emission reduction efficiency, %

- b. As indicated by SCREEN3 modeling results, demonstration of compliance with the source-wide emission limitations in **Source Emission Limitation 3.b.**, above, shall also serve as the demonstration of compliance with the air toxic limitation in **Source Emission Limitation 3.c.**, above.
4. **Source Recordkeeping Requirements:** The permittee shall retain a record of each source-wide monthly compliance demonstration completed in accordance with **Compliance Demonstration Method 3.a.**, above.
5. **Source Reporting Requirements:**
The permittee shall submit a report of the following information to the Division for Air Quality's Florence office in accordance with **Section F.5.** and **F.6.** of this permit:
 - a. A summary report containing a copy of all monthly source-wide compliance demonstration records (as provided above) during the previous reporting period.
 - b. Identification of any deviations from source-wide permit requirements that occurred during the reporting period.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

1. Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

2. **Operating Limitations:**

- a. VOC's and/or HAP's emitted from the equipment specified in **Section B** of the permit must be routed to one of the Thermal Oxidizers described below (SEU 103 or 26). The Thermal Oxidizer receiving the VOC's and/or HAP's shall be operating at all times that the emissions are routed to it. [401 KAR 50:012, Section 1(1); 401 KAR 52:030, Section 1; and 401 KAR 63:020, Section 3]

Primary Control:

-- (SEU 103) "New" Thermal Oxidizer

Manufacturer: John Zink

Model: SO# 901078

Description: Single chamber, 30 mmBtu/hr, incorporating waste heat boiler (See SEU 102 in Insignificant Activities)

Fuel: Natural Gas – primary, Propane – auxiliary

Date constructed: 1996

Secondary Control:

-- (SEU 26) "Old" Thermal Oxidizer

Manufacturer: John Zink

Model: SO# X43231

Description: Single chamber, 2 mmBtu/hr

Fuel: Natural Gas – primary, Propane – auxiliary

Date constructed: 1980

- b. Each Thermal Oxidizer (SEU 103 and 26) shall have a destruction efficiency of at least 97.94%. [401 KAR 50:012, Section 1(1)(a)2.; 401 KAR 52:030, Section 1; and F-05-027 Revision 1]
- c. The permittee shall maintain a minimum firebox temperature of 1400°F, or the combustion temperature limit established during the most recent performance test (see **Testing Requirement 3.c.**, below), in the Thermal Oxidizers (SEU 103 and 26) at all times during which VOC's and/or HAP's are being vented to them. [State only requirement from O-83-50A, and S-95-115 Revision 1]

Compliance Demonstration Method: See the **Testing, Monitoring, Recordkeeping, and Reporting Requirements**, below.

3. **Testing Requirements:**

- a. Pursuant to Regulations 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS
(Continued)**

- b. At least once during the term of this permit, the permittee shall conduct a Method 25 or 25A performance test, as applicable, for each of the Thermal Oxidizers (SEU 103 and 26) as outlined in Appendix A to 40 CFR Part 60 to verify the overall reduction efficiency of VOC's. This testing requirement is also applicable to reconstruction or modification of any component of the Thermal Oxidizers (SEU 103 and 26), or construction, reconstruction, or modification of any component venting to them that may affect the reduction efficiency of VOC's and potentially hazardous matter or toxic substances. [401 KAR 50:045 Section 1]
- c. The permittee shall use the data collected during the performance test to calculate and record the average combustion temperature of each Thermal Oxidizer (SEU 103 and 26). This combustion temperature shall be the minimum operating temperature for the Thermal Oxidizers (SEU 103 and 26). [See **Operating Limitation 2.c.**, above]
- d. When demonstration of compliance, through performance test, is made at a production rate less than the maximum specified in the application form, the permit shall be conditioned to limit the production rate to no more than 110% of the average test rate. [401 KAR 50:045, Section 5(2)]

4. Specific Monitoring Requirements:

- a. The permittee shall utilize a temperature measurement device according to the manufacturer's specifications for monitoring the combustion temperature of the Thermal Oxidizers (SEU 103 and 26). Each device shall have an accuracy of the greater of 0.75% of the temperature being measured expressed in °C (or °F) or +/- 2.5 °C (or Fahrenheit equivalent). [S-95-115 Revision 1]
- b. The temperature measurement devices shall be equipped with a continuous recording device (strip chart recorder or digital data acquisition system or equivalent). [S-95-115 Revision 1]
- c. The Thermal Oxidizers (SEU 103 and 26) shall be set to operate under conditions of excess air (greater than stoichiometric ratio) at all times the unit is in operation. [S-95-115 Revision 1]
- d. The Thermal Oxidizers (SEU 103 and 26) shall be equipped with a feedback loop control system controlling the feed rate of natural and combustion air to the afterburner. The control system shall be designed to maintain the required minimum temperature in the fume afterburner firebox by controlling natural gas flow in sufficient amounts, while ensuring combustion air is available in excess amounts. [S-95-115 Revision 1]
- e. The Thermal Oxidizers (SEU 103 and 26) shall be equipped with a monitoring device that will be activated whenever the afterburner firebox temperature drops below 1350°F, or the temperature that is 50°F below the combustion temperature limit established during the most recent performance test. The device shall deliver an audio and/or visual signal indicating that the afterburner firebox temperature dropped below 1350°F, or the temperature that is 50°F below the combustion temperature limit established during the most recent performance test. [S-95-115 Revision 1]

5. Specific Recordkeeping Requirements:

- a. The permittee shall keep continuous records of the temperature in the firebox of the Thermal Oxidizers (SEU 103 and 26) at all times during which VOC and/or HAP's is vented to them. [S-95-115 Revision 1]

**SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS
(Continued)**

- b. The permittee shall maintain a record of the occurrence of all upset conditions of the Thermal Oxidizers (SEU 103 and 26). An upset condition is one during which the following three conditions are met: [S-95-115 Revision 1]
 - (1) Any of the equipment specified in **Section B** of the permit to vent to the Thermal Oxidizers (SEU 103 and 26) is releasing VOC's or HAP's;
 - (2) The temperature in the Thermal Oxidizers (SEU 103 and 26) drops below 1350°F, or the temperature that is 50°F below the combustion temperature limit established during the most recent performance test; and
 - (3) The temperature stays below 1350°F, or the temperature that is 50°F below the combustion temperature limit established during the most recent performance test, for a period of 30 minutes or more.
 - c. For all upset conditions described above, the permittee shall also keep a log of the following information: [S-95-115 Revision 1]
 - (1) The phase of operation of each Process Kettle and/or each Thinning Kettle during the event.
 - (2) The duration of the event, i.e., the total time period for which the temperature was below 1350°F, or the temperature that is 50°F below the combustion temperature limit established during the most recent performance test.
 - (3) The probable cause of the temperature drop.
 - (4) Corrective action taken to elevate the afterburner firebox temperature back to 1400°F, or the combustion temperature limit established during the most recent performance test.
 - d. The permittee shall maintain records of any unplanned shutdowns of the fume afterburner. [S-95-115 Revision 1]
 - e. The permittee shall maintain records of all non-routine maintenance and repair activities conducted on the afterburner and the associated monitoring devices and recorders. [S-95-115 Revision 1]
6. **Specific Reporting Requirements:**
- a. Upset conditions, as defined in Specific Recordkeeping Requirement 5.b., above, shall be reported to the Division for Air Quality's Florence office in accordance with **Section F.7.** of this permit. [S-95-115 Revision 1]
 - b. Periods when any of the equipment specified in **Section B** of the permit to vent to the Thermal Oxidizers (SEU 103 and 26) is releasing VOC's or HAP's, but the Thermal Oxidizers are not working properly (i.e.: in accordance with manufacturer's specifications) shall be reported to the Division for Air Quality's Florence office in accordance with **Section F.7.** of this permit.
 - c. At least 60 days prior to the date of required performance tests, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6028) to the Division's Frankfort Central Office. [401 KAR 50:045, Section 2(1)]
 - d. Performance test results shall be submitted in accordance with **Section F.11.** of this permit.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)(1) of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
 - a. Date, place (as defined in this permit), and time of sampling or measurements;
 - b. Analyses performance dates;
 - c. Company or entity that performed analyses;
 - d. Analytical techniques or methods used;
 - e. Analyses results; and
 - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:030 Section 3(1)(f)1.a. and Section 1a (7) of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
3. In accordance with the requirements of 401 KAR 52:030 Section 3(1)f the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
 - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
 - b. To access and copy any records required by the permit;
 - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.
Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:030 Section 22. All deviations from permit requirements shall be clearly identified in the reports.
7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall submit written notice upon request.
8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by Section F.5 [Section 1b V(3) and (4) of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
9. Pursuant to 401 KAR 52:030, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit in accordance with the following requirements:
 - a. Identification of each term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;
 - d. The method used for determining the compliance status for the source, currently and over the reporting period.
 - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
 - f. The certification shall be postmarked by January 30th of each year. **Annual compliance certifications should be mailed to the following addresses:**

Division for Air Quality
Florence Regional Office
8020 Veterans Memorial Dr., Suite 110
Florence, KY 41042

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

10. In accordance with 401 KAR 52:030, Section 3(1)(d), the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee. If a KYEIS emission report is not mailed to the permittee, comply with all other emission reporting requirements in this permit.
11. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.
12. The Cabinet may authorize the temporary use of an emission unit to replace a similar unit that is taken off-line for maintenance, if the following conditions are met:
 - a. The owner or operator shall submit to the Cabinet, at least ten (10) days in advance of replacing a unit, the appropriate Forms DEP7007AI to DD that show:
 - (1) The size and location of both the original and replacement units; and
 - (2) Any resulting change in emissions;
 - b. The PTE of the replacement unit shall not exceed that of the original unit by more than twenty-five (25) percent of a major source threshold, and the emissions from the unit shall not cause the source to exceed the emissions allowable under the permit;
 - c. The PTE of the replacement unit or the resulting PTE of the source shall not subject the source to a new applicable requirement;
 - d. The replacement unit shall comply with all applicable requirements; and
 - e. The source shall notify Regional office of all shutdowns and start-ups.
 - f. Within six (6) months after installing the replacement unit, the owner or operator shall:
 - (1) Re-install the original unit and remove or dismantle the replacement unit; or
 - (2) Submit an application to permit the replacement unit as a permanent change.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

- a. The permittee shall comply with all conditions of this permit. A noncompliance shall be a violation of 401 KAR 52:030 Section 3(1)(b) and is also a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to the termination, revocation and reissuance, revision, or denial of a permit [Section 1a (2) of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a (5) of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:030 Section 18. The permit will be reopened for cause and revised accordingly under the following circumstances:
 - (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:030 Section 12;
 - (2) The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
 - (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

- d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the conditions of this permit [Sections 1a (6) and (7) of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].

SECTION G - GENERAL PROVISIONS (CONTINUED)

- e. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:030 Section 7(1)].
- f. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a (11) of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- g. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a (3) of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- h. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a (12)(b) of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- i. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038 Section 3(6) [Section 1a (9) of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- j. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:030 Section 11(3)].
- k. This permit does not convey property rights or exclusive privileges [Section 1a (8) of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- l. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.
- m. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry.
- n. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders.

SECTION G - GENERAL PROVISIONS (CONTINUED)

- o. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.
- p. Permit Shield – A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
 - a. Applicable requirements that are included and specifically identified in this permit; and
 - b. Non-applicable requirements expressly identified in this permit.
- q. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:030 Section 3(1)(c)].
- r. The authority to operate granted through this permit shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:030 Section 8(2)].

2. Permit Expiration and Reapplication Requirements

This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:030 Section 12].

3. Permit Revisions

- a. Minor permit revision procedures specified in 401 KAR 52:030 Section 14 (3) may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:030 Section 14 (2).
- b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

- a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
- b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
 - (1) The date when construction commenced.
 - (2) The date of start-up of the affected facilities listed in this permit.
 - (3) The date when the maximum production rate specified in the permit application was achieved.
- c. Pursuant to 401 KAR 52:030, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.
- d. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the draft permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.
- e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration (*test*) on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. ***These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test***
- f. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

SECTION G - GENERAL PROVISIONS (CONTINUED)

- g. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.
- h. Pursuant to 401 KAR 50:045 Section 5 in order to demonstrate that a source is capable of complying with a standard at all times, a performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirement on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements

5. Acid Rain Program Requirements

If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

6. Emergency Provisions

- a. Pursuant to 401 KAR 52:030 Section 23(1), an emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:
 - (1) An emergency occurred and the permittee can identify the cause of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
 - (4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two (2) working days of the time when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken.
 - (5) Notification of the Division does not relieve the source of any other local, state or federal notification requirements.

SECTION G - GENERAL PROVISIONS (CONTINUED)

- b. Emergency conditions listed in General Provision G(f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:030 Section 23(3)].
- c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:030 Section 23(2)].

7. Risk Management Provisions

- a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center
P.O. Box 1515
Lanham-Seabrook, MD 20703-1515.

- b. If requested, submit additional relevant information to the Division or the U.S. EPA.

8. Ozone depleting substances

- a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
 - (2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
 - (3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
 - (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
 - (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H - ALTERNATE OPERATING SCENARIOS

None.

SECTION I - COMPLIANCE SCHEDULE

None.